

## IN THE CLAIMS

1. (Currently Amended) A system to simulate a process of discrete events or tasks having a plurality of available resources associated therewith, the system comprising:

a database to store a plurality of models, each model including a plurality of one or more entity, task, and resource parameter, each model associated with a model template having a plurality of tables representative of each of the plurality of one or more entity, task, and resource parameter, wherein the database is configured to store a plurality of model objects that include modeling data, algorithms and I/O of at least one of standalone models, models deployed in decisioning, and historical models from prior simulations;

a model application in communication with the database and configured to receive commands from a user, to retrieve one of the plurality of models and the corresponding plurality of one or more entity, task, and resource parameter in response to a user command, to receive input data corresponding to one or more entity, task, and resource parameter from a business database system, to perform allocations of the one or more of entity, task and resource parameter, to store the allocations in the database and to generate a simulation model based on the business database system, the allocations that are retrieved from the database by the model application to generate the simulation model and the input data, wherein the model application is further configured to build each model from combined model objects that instantiate new object models;

an optimizing application in communication with the model application and configured to receive commands from a user, to select one or more entity, task, and resource parameter of the simulation model with respect to an objective function, to define bounds of one or more of the entity, task, and resource parameter selected, and to generate values for the objective function

based on the at least one of the task, and resource parameter selected; and

a server to perform a simulation of the process by processing the simulation model and to generate an output data file containing output data representative thereof and configured to be stored as a future model template in the database for at least one additional simulation and as input to the model application.

2. (Previously Presented) The system according to claim 1, wherein the objective function comprises a combination of system financial performance measures and process performance measures.

3. (Previously Presented) The system according to claim 1 wherein the optimization application is further configured to receive commands from a user to select another one or more entity, task, and resource parameter of the simulation model with respect to an objective function, to define bounds of the one or more of the entity, task, and resource parameter selected, and to generate values for the objective function based on the another one or more of the entity, task, and resource parameter selected.

4. (Original) The system according to claim 1, wherein the optimizing application in communication with the model application and configured to receive commands from a user further to generate financial performance data based on the values generated for the objective function.

5. (Original) The system according to claim 1, wherein at least one of the model application and the optimization application are located at a web server.

6. (Original) The system according to claim 1, wherein at least one of the model application and the optimization application is interactive with a user.

7. (Original) The system according to claim 6, wherein the interacting with a user is performed over the Internet.

8. (Original) The system according to claim 1, wherein the model application performs processing on the input data corresponding to attributes of one or more entity, task, and resource parameter from the business database system, the processing including determining relationships within the input data.

9. (Original) The system according to claim 8, wherein the processing includes performing distribution curve fitting on the input data using a goodness of fit technique.

10. (Original) The system according to claim 1, wherein commands from a user are received through a graphical user interface, the graphical user interface located remote from the database.

11. (Currently Amended) A method to simulate a process of discrete events or tasks having a plurality of available resources associated therewith, the method comprising:

storing a plurality of models at a database, each model including a plurality of one or more entity, task, and resource parameter, each model associated with a model template having a plurality of tables representative of each of the plurality of one or more entity, task, and resource parameter, wherein the database is configured to store a plurality of model objects that include modeling data, algorithms and I/O of at least one of standalone models, models deployed in decisioning, and historical models from prior simulations;

communicating with a model application by a user, the model application in communication with the database and configured to receive commands from a user, to retrieve one of the plurality of models and the corresponding plurality of one or more entity, task, and

resource parameter in response to a user command, to receive input data corresponding to one or more entity, task, and resource parameter from a business database system, to perform allocations of the one or more of entity, task and resource parameters, to store the allocations in the database and to generate a simulation model based on the business database system, the allocations that are retrieved from the database by the model application to generate the simulation model and the input data, wherein the model application is further configured to build each model from combined model objects that instantiate new object models;

communicating with an optimization application by a user, the optimizing application in communication with the model application and configured to receive commands from a user, to select one or more entity, task, and resource parameter of the simulation model with respect to an objective function, to define bounds of at least one of the entity, task, and resource parameter selected, and to generate values for the objective function based on the one or more of the entity task and resource parameter selected;

performing a simulation of the process by processing the simulation model; and

generating an output data file containing output data representative of the simulation and configured to be stored as a future model template in the database for at least one additional simulation and as input to the model application.

12. (Previously Presented) The method according to claim 11, wherein the objective function comprises a combination of system financial performance measures and process performance measures.

13. (Previously Presented) The method according to claim 11 wherein the optimization is further configured to receive commands from a user to select another one or more other entity,

task, and resource parameter of the simulation model, to define bounds of one or more of the another one or more of entity, task, and resource parameter selected, and to generate values for the objective function based on the another one or more of the entity, task, and resource parameter selected.

14. (Original) The method according to claim 11, wherein the optimizing application in communication with the model application and configured to receive commands from a user further to generate financial performance data based on the values generated for the objective function.

15. (Original) The method according to claim 11, further comprising processing at the model application the input data corresponding to attributes of one or more entity, task and resource parameter from the business database system, the processing including determining relationships within the input data.

16. (Original) The method according to claim 15, wherein the processing includes performing distribution curve fitting on the input data using a goodness of fit technique.

17. (Original) The method according to claim 11, wherein commands from a user are received through a graphical user interface, the graphical user interface located remote from the database.

18. (Currently Amended) A storage medium encoded with machine-readable program code for simulating a process of discrete events or tasks having a plurality of available resources associated therewith, the program code including instructions for causing a computer to implement a method comprising:

retrieving one of a plurality of models and corresponding plurality of one or more entity,

task, and resource parameter in response to a user command, each model associated with a model template having a plurality of tables representative of each of the plurality of one or more entity, task, and resource parameter wherein each model is further associated with a plurality of model objects that include modeling data, algorithms and I/O of at least one of standalone models, models deployed in decisioning, and historical models from prior simulations;

receiving input data corresponding to one or more entity, task, and resource parameter from a business database system;

performing allocations of the one or more of entity, task and resource parameters;

generating a simulation model for display on a graphical user interface on the computer based on the business database system and the input data, wherein the simulation model is built upon a model from combined model objects that instantiate new object models;

receiving a selection of at least one entity, task, and resource parameter of the simulation model with respect to an objective function;

receiving a definition of bounds of one or more of the entity, task, and resource parameter selected;

executing a simulation engine to generate and store values for the objective function used to generate the simulation model and based on one or more of the entity, task, and resource parameter selected and the allocations of the one or more of entity, task and resource parameters;  
and

performing a simulation of the process by processing the simulation model for display on the graphical user interface.

19. (Previously Presented) The storage medium according to claim 18, wherein the objective function further comprises a combination of system financial performance measures and process performance measures.

20. (Previously Presented) The storage medium according to claim 18, wherein the method further comprises:

receiving a selection of another one or more entity, task, and resource parameter of the simulation model with respect to an objective function; and

receiving a definition of bounds of the another one or more of the entity, task, and resource parameter selected.

21. (Currently Amended) An apparatus for simulating a process of discrete events or tasks having a plurality of available resources associated therewith, the apparatus comprising:

means for storing a plurality of models at a database, each model including a plurality of one or more entity, task, and resource parameter, each model associated with a model template having a plurality of tables representative of each of the plurality of one or more entity, task, and resource parameter, wherein the database is configured to store a plurality of model objects that include modeling data, algorithms and I/O of at least one of standalone models, models deployed in decisioning, and historical models from prior simulations;

means for communicating with a model application by a user, the model application in communication with the database and configured to receive commands from a user, to retrieve one of the plurality of models and the corresponding plurality of one or more entity, task, and resource parameter in response to a user command, to receive input data corresponding to one or more entity, task, and resource parameter from a business database system, to perform allocations

of the one or more of entity, task and resource parameters, to store the allocations in the database and to generate a simulation model based on the business database system, the allocations that are retrieved from the database by the model application to generate the simulation model and the input data, wherein the model application is further configured to build each model from combined model objects that instantiate new object models;

means for communicating with an optimization application by a user, the optimizing application in communication with the model application and configured to receive commands from a user, to select one or more entity, task, and resource parameter of the simulation model with respect to an objective function, to define bounds of one or more of the entity, task, and resource parameter selected, and to generate values for the objective function based on the one or more of the entity, task, and resource parameter selected;

means for performing a simulation of the process by processing the simulation model; and

means for generating an output data file containing output data representative of the simulation and configured to be stored as a future model template in the database for at least one additional simulation and as input to the model application.

22. (Original) The apparatus according to claim 21, wherein the objective function comprises a combination of system financial performance measures and process performance measures

23. (Previously Presented) The apparatus according to claim 21 wherein the optimization is further configured to receive commands from a user to select another one or more entity, task, and resource parameter of the simulation model with respect to an objective function, to define bounds of the another one or more of the other entity, task, and resource parameter



selected, and to generate values for the objective function based on the another one or more of the entity, task, and resource parameter selected.

24. (Original) The apparatus according to claim 21, wherein the optimizing application in communication with the model application and configured to receive commands from a user further to generate financial performance data based on the values generated for the objective function.

25. (Original) The apparatus according to claim 21, further comprising means for processing at the model application the input data corresponding to attributes of one or more entity, task, and resource parameter from the business database system, the means for processing including determining relationships within the input data.

26. (Original) The apparatus according to claim 25, wherein the means for processing includes means for performing distribution curve fitting on the input data using a goodness of fit technique.

27. (Original) The apparatus according to claim 21, wherein commands from a user are received through a graphical user interface, the graphical user interface located remote from the database.

28. (Previously Presented) The apparatus according to claim 21 further comprises means for updating the model database with performance and processing details from an operation data system.